development of myocardial contractility in the early stages of ontogenesis. However, in addition to localization in sympathetic postganglionic fibers, NPY was also found in interneurons, which are located at the base of the heart, endocardium, and myocardium.

The study of the contractile activity of the myocardium strips of right ventricle was performed using «PowerLab» («ADInstruments») unit with «MLT 050/D» force sensor («ADInstruments»). CGP 71683 was added in a concentration 1.4 mM.

NPY in concentrations of 10^{-9}-10^{-5} causes a dose-dependent change in the contractility of the ventricular myocardium of rats 7- days of age. The greatest effect is observed in the concentration of 10^{-7}M. Adding blocker CGP 71683 causes a decrease in contractility of the ventricular myocardium by 8.6%. Againstthe background of the NPY5 receptors blockade, the amplitude-time parameters of isometric contraction do not reach the starting values.

Thus, NPY_5-receptors take part in realization of positive inotropic effect in ventricular myocardium in 7-day animals.

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THE POSTSYNAPTIC ACETYLCHOLINE RECEPTOR ORGANIZATION AND ACETYLCHOLINESTERASE ACTIVITY IN NEUROMUSCULAR SYNAPSES OF RAT «FAST» AND «SLOW» MUSCLES UNDER HYPOGRAVITY

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Using immunofluorescent techniques we have shown that 35 day revealed that 35 days of hindlimb unloading resulted in the increase of the intensity and decrease of fluorescent staining area of acetylcholine receptors, enhanced intensity and extended area of fluorescent staining for acetylcholinesterase, in the change of the ratio of the number of postsynaptic acetylcholine receptors and the amount of acetylcholinesterase as well as their spatial position relative to each another in neuromuscular synapses of rat «fast» and «slow» muscles. These results on synapse restructuring correlate with electrophysiological data which showed the decrement of the amplitude of miniature endplate currents in both muscles. The above mentioned changes are accompanied by the decrease in the volume of muscle fibers. Hindlimb unloading (simulation of hypogravity) leads to an increase in functional activity of acetylcholinesterase on the background of reduced postsynaptic membrane area occupied by acetylcholine receptors. That leads to the reduction of the amplitude of excitatory postsynaptic potentials thereby reducing the nerve-muscle excitation transmission safety factor.